The Impact on Retention & Graduation of LaGuardia Foundation Scholarships

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Summary

I compared students who received foundation scholarships in two semesters, Fall 2013 and Fall 2014, against students matching on four characteristics who applied for but were denied scholarships. In general, students receiving scholarships attempted and earned slightly more credits, but had the same GPA in the semester in which the scholarships were given. Scholarship students were also slightly more likely to graduate. None of these differences were statistically significant. Even in the best case, Fall 2014 graduations, there is a one-in-four chance that the higher number of scholarship graduations is due to random variation. Significance is usually defined as less a than one-in-twenty chance of random outcome.

Results

Table 1 shows the outcome variables for the "received" and "denied" groups. I was not able to find "denied" matches for all students receiving scholarships in those semesters. As a result, a few scholarship recipients were not included in the study. The Fall 2013 cohort's possible graduation dates include Fall 2013, Spring 2014 and Fall 2014.

Fall 2013 and Fall 2014 Scholarship Cohort Outcomes

	Equated Credits Attempted	Equated Credits Earned	GPA	Graduated	Returned in Spring	Graduated or Returned
Fall 2013	N=349					
Received Scholarship	14.9	12.7	3.18	165	93	254
Denied	14.4	12.3	3.21	155	90	241
Fall 2014	N=396					
Received Scholarship	15.1	12.4	2.95	24	304	328
Denied	14.3	11.5	2.96	17	312	329

Table 1

Matching characteristics

Each student in the scholarship group was matched against students in the denied group on five characteristics: credits earned (range) by the start of the award semester, cumulative GPA (range) before the start of the award semester, gender, student visa status (yes/no), and federal or state financial aid (grants only) award status (yes/no). The outcomes for each of the two groups were weighted such that both groups had equal numbers of students with each set

of characteristics (propensity score weighting). The characteristics were chosen to make the two groups equally likely to graduate and be retained before the impact of the scholarship.

Figures 1 and 2 show the distribution of individual characteristics among both the recipient and denied groups.

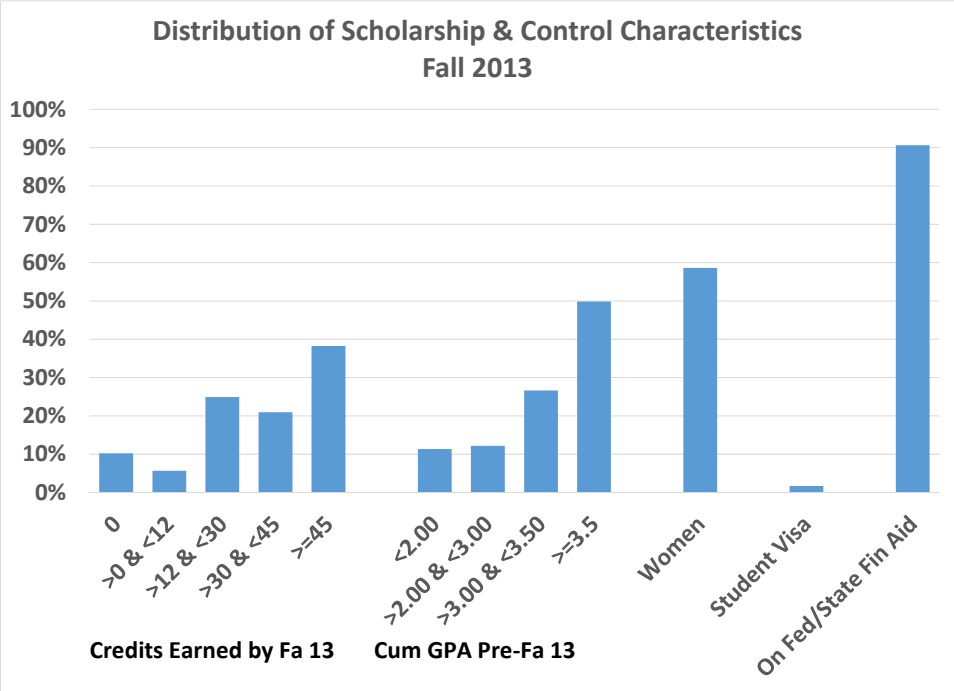

Figure 1

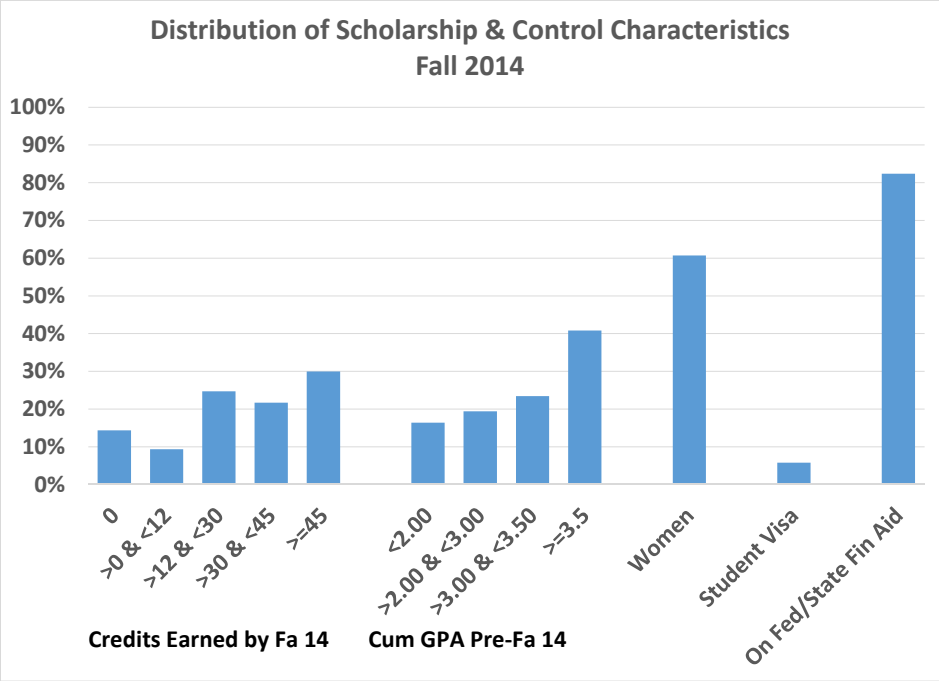

Figure 2

Discussion

Previous studies have matched scholarship recipients against a general control group, not necessarily those denied. A quick test of that methodology with this data shows that we would have significant outcome differences between both of these scholarship groups and a general, not-necessarily-denied control group matched on these characteristics. Thus, previous studies may not have controlled for a characteristic that differentiated students who applied, like "motivation." By using those who applied, but were denied (usually because of a lack of sufficient funding for the scholarships), the apparent impact of receiving a scholarship is much diminished. If sufficient numbers of "denied" students had been available in previous studies, those students should have been used to build a control group.

In conducting this study, I used all awards, regardless of size. Perhaps the impact would be more significant above a certain award level, but reducing the number of students in the study with this restriction also works in the opposite direction, making statistical significance more difficult achieve.

This study may also be evidence that the college's scholarship award process needs refining. To have a significant effect, awards should be given to more students who require the funds to stay in college and graduate. Figures 1 and 2 show that a number of students had very few credits and low GPAs (some zero GPAs are simply new students, however). The awards are also somewhat biased toward recipients of financial aid (80% to 90% as opposed to the 48% of all degree students with any financial aid) which may be wise, or may demonstrate that communication is not reaching all worthy prospects.

Addendum

One can also compare scholarship recipients to all other students, including those who were denied. This method, however, reduces our ability to determine whether the scholarship assisted students or whether the scholarship program merely attracted already more successful students. The prior methodology discussed in the sections above gives a clearer picture of the extent of the scholarships impact on student success.

In Fall 2013 I matched 350 students to a control group weighted to be the same size with the same set of characteristics discussed above. In Fall 2014 I matched 396 students to a control group of students denied or not applying for scholarships.

All differences in Table 2 are statistically significant at the .05 level, except the number of returnees from the Fall 2013 (which is to be expected since so many scholarship students graduated) and the number of graduates in the first semester after the Fall 2014 awards. The difference between the number of Fall 2013 graduates or returnees is significant at a lower level of tolerance, .10.

Fall 2013 and Fall 2014 Scholarship Cohort Outcomes vs. Students Not Receiving

	Equated Credits Attempted	Equated Credits Earned	GPA	Graduated	Returned in Spring	Graduated or Returned
Fall 2013	N=350					
Received Scholarship	14.9	12.7	3.17	165	93	254
Not Receiving	13.3	10.4	2.91	134	98	232
	Sig.	Sig.	Sig.	Sig.	Not Sig.	Sig. @ 0.1
Fall 2014	N=396					
Received Scholarship	15.2	12.4	2.96	24	306	330
Not Receiving	13.4	10.3	2.76	19	283	302
	Sig.	Sig.	Sig.	Not Sig.	Sig.	Sig.

Table 2